

Application No.: 10/632,281
Reply to Office Action of May 15, 2008

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REMARKS/ARGUMENTS

Reconsideration is requested in view of the foregoing claim revisions and following remarks. Claim 26 has been editorially revised. Support for the revision to claim 26 can be found in paragraphs [0016] and [0017] as well as Figure 4, among other places. Claims 26-31 remain under consideration in the present application.

Claim Rejections – 35 USC §102

Claims 26-27 and 30-31 are rejected under 35 U.S.C. §102(a) as now anticipated by Corbeil et al. (US Pub. No. 2004/0262526 A1). Applicant respectfully traverses this rejection.

Claim 26 is directed to an anisotropic scintillator for use in an imaging system comprising:

a scintillator element comprised of a scintillator material having a first optical property;

a three-dimensional pattern formed in said scintillator element utilizing a pulse laser, said pulse laser altering said first optical property at a plurality of discrete locations in said scintillator element such that said three dimensional pattern is comprised of scintillator material having a second optical property and such that said three dimensional pattern forms localized channel regions in said scintillator element.

wherein said three-dimensional pattern is configured to control the spread of photons to achieve desired signal sharing among the plurality of regions having borders defined by the plurality of discrete locations within said scintillator element.

The invention of Corbeil teaches a three dimensional pattern formed by ablating scintillator material to create micro-voids in which the optical properties of the remaining scintillator material itself are unchanged. In contradistinction, the claimed invention requires a scintillator material having optical properties that are altered to create a three dimensional pattern of scintillator material having a second optical property. The borders disclosed by Corbeil therefore are formed by the micro-voids and depend on the absence

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of scintillator material; while the borders (discrete locations) formed by the invention of claim 26 comprise scintillator material having a second optical property.

The claimed invention relies on sharing of light between anisotropic regions within a scintillator element, and relies on precisely controlling this sharing of light between the regions via modifying a wide variety of scintillator material optical properties described for particular embodiments of the invention in paragraph [0017] of the specification. These modified optical properties can include, changing the crystal structure of a crystalline scintillator, creating local crystal domains of different orientation than the surrounding crystalline material in a single crystal, creating localized crystalline regions in otherwise non-crystalline materials (such as glass), changing the index of refraction at the focal spot 36, changing the optical absorption at the focal spot 36, changing the photon scattering properties at the focal spot 36, or by otherwise damaging the scintillator element 24. The claimed invention is therefore distinctly different from the invention of Corbeil et al. that relies on micro-voids by creating an absence of scintillator material.

For at least these reasons, claim 26 is patentable over Corbeil et al. Claims 27 and 30-31 are patentable through their dependency on claim 26.

Claim Rejections - 35 USC §103

Claims 28 and 29 are rejected under 35 U.S.C. §103(a), as unpatentable over Corbeil et al. Applicant respectfully traverses this rejection for at least the same reasons discussed above regarding claim 26.

Claims 28 and 29 are patentable through their dependency on claim 26. Applicant does not concede the correctness of the rejections or the relevance of the cited art to the remaining claim features.

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P. 12

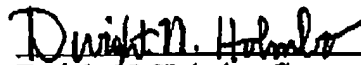
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Application No.: 10/632,261
Reply to Office Action of May 15, 2008

Favorable reconsideration in the form of a Notice of Allowance is requested. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at (507) 351-4450.

Respectfully submitted,



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August 11, 2008

11 of 11